

REMARKS

I. Status of the Claims

Claims 1-58 are pending in this application. Claims 1-3, 5, 12-20 and 40-47 are rejected. Claims 4, 6-11, 21-39, and 48-58 are withdrawn from consideration by the Examiner. However, Applicants again request that the Examiner expand her search to a reasonable number of non-elected species after the elected species is found to be allowable. M.P.E.P. § 803.02. No claims have been added or amended by this Reply.

II. Rejection Under 35 U.S.C. §103(a) over Nagamine

Claims 1, 18, 40, and 47 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Japanese Patent Publication No. 1-249333 ("Nagamine") for reasons discussed at pages 2-3 of the Office Action. Applicants respectfully traverse this rejection for at least the reasons that follow.

To establish a prima facie case of obviousness, an Examiner must show that the cited prior art references, taken alone or in combination, (1) would have suggested to or provided motivation for one of ordinary skill in the art to make the claimed invention; and (2) would have provided one of ordinary skill with a reasonable expectation of success in so making. See *In re Vaeck*, 497 F.2d 488, 493 (Fed. Cir. 1991) (citing *In re Dow Chemical Co.*, 837 F.2d 469, 473 (Fed. Cir. 1988)); see also M.P.E.P. §2143. Both the suggestion and the reasonable expectation of success must be found in the prior art, not in the applicant's disclosure. *In re Vaeck*, 947 F.2d at 493. Here, Applicants respectfully submit that the rejections under §103 are fatally flawed because Nagamine does not meet these requirements for a prima facie case of obviousness under §103.

1. *There is no suggestion or motivation for one in the art to make the claimed invention*

The Examiner has not demonstrated a suggestion or motivation for utilizing Nagamine to make the claimed invention. Examiners have a duty to make explicit factual findings as evidence of a motivation for making a claimed invention. *See In re Lee*, 277 F.3d 1338, 1343 (Fed. Cir. 2002). Indeed, these factual findings must be "clear and particular." *In re Dembiczak*, 175 F.3d 994, 999 (Fed. Cir. 1999). In the present case, the Examiner has provided no such evidence.

Upon examining Nagamine, it is clear that the reference does not teach or even remotely suggest a motivation to making the presently claimed invention. In particular, Nagamine is drawn to a glass cloth for a laminate and to a laminate produced utilizing the aforementioned glass cloth, as well as methods of producing each. Nagamine at 1.

Although the Examiner states that "Nagamine teaches that the sizing agent used for glass yarns include a recently developed non-desizing sizing agent that does not require degreasing or surface treatment," there is absolutely no tangible evidence in the prior art reference to support the Examiner's statement that "the teachings of Nagamine would have provided direction to the skilled artisan to use . . . a fabric that is sized with a sizing agent that does not require degreasing." Office Action at 3. On this issue, Nagamine is silent.

Moreover, the Federal Circuit has held a prior art reference must be considered in its entirety, and one may not "disregard disclosures in the references that diverge from and teach away from the invention at hand." *W.L. Gore & Assocs., Inc., v. Garlock, Inc.*, 721 F.2d 1540, 1550 (Fed. Cir. 1983); *see also Bausch & Lomb, Inc., v. Barnes-Hind/Hydrocurve, Inc.*, 796 F.2d 443, 448 (Fed. Cir. 1986). Thus, the Examiner

must consider the entire disclosure of Nagamine, including those portions that are inconsistent with her asserted position. See *In re Kotzab*, 217 F.3d 1365, 1370 (Fed. Cir. 2000) (“a rejection cannot be predicated on the mere identification in [a prior art reference] of individual components of claimed limitations”).

In this regard, every single example in Nagamine utilizes a glass cloth with a sizing material that required degreasing prior to physical test of the cloth or impregnation of the cloth with a resin material. Additionally, Nagamine’s invention works perfectly well with its degreased glass cloth and its disclosure provides no indication to one of ordinary skill in the art that this method should be replaced. Nagamine further praises the advantages of the degreased glass cloth by stating that “[u]sing such a glass cloth, a high quality laminate including no air bubbles therein can be obtained at high productivity.” Nagamine at 21. Having read the glowing reports of the advantages of the invention in Nagamine, a person of ordinary skill in the art would hardly have attempted to improve on his method’s allegedly superior properties. Collectively, these factors, in effect, teach away from the use of non-degreased sizing agents and, consequently, away from the inclusion of non-degreased sizing agents in Nagamine. See M.P.E.P. § 2141.02 (“A prior art reference must be considered in its entirety, i.e., as a whole including portions that would lead away from the claimed invention.”) (emphasis added); *In re Kotzab*, 217 F.3d at 1371.

As a result, Applicants respectfully submit that Nagamine does not teach or even remotely suggest a motivation to combine selected teachings taken out of context of the patent as a whole. M.P.E.P. § 2143.01; cf. *In re Rouffet*, 149 F.3d 1350, 1357 (Fed. Cir. 1998) (“rejecting patents solely by finding prior art corollaries for the claimed

elements . . . would be an illogical and inappropriate process by which to determine patentability”) (quotation omitted). The law requires “clear and particular evidence” of a motivation to make the invention, but the Examiner’s only statement in this regard is that the mention of a non-degreased sizing agent in Nagamine “would have provided direction to the skilled artisan. . . with the reasonable expectation of improving economic aspects of the production process and improving production yield.” Office Action at 3. In the absence of specific evidence, this broad and ambiguous statement is hardly “clear and particular evidence” of a motivation to modify the cloth disclosed in Nagamine by utilizing a procedure that is only mentioned in passing in the reference.

2. *There is no evidence of a reasonable expectation of success*

In addition to showing a motivation to utilize the prior art reference to make the claimed invention, the Examiner must show why a person of ordinary skill in the art would have had a reasonable expectation of success of so making. See, e.g., M.P.E.P. § 2143.02.

In the present case, the Examiner has not presented evidence that the teachings of Nagamine would have provided one of ordinary skill in the art with a reasonable expectation of success in making the present invention. Rather, the Examiner inaccurately concludes that the teachings of Nagamine “would have provided direction to the skilled artisan to use a fabric that is sized with a sizing agent that does not require degreasing. . . with the reasonable expectation of improving economic aspects of the production process and improving production yield.” Office Action at 3 (emphasis added). Such statements are conclusory in light of the lack of cited evidence and the vague teachings of the prior art, from which the Examiner carves out particular

combinations in an attempt to obtain the claimed invention. Moreover, for the reasons set forth above, Nagamine provides an expectation of success for sizing agents that require degreasing.

At best, the reference would lead one to try to obtain the claimed invention. In moving from the prior art to the claimed invention, however, one cannot base a determination of obviousness on what the skilled person might try or find obvious to try. Rather, the proper test requires determining what the prior art would have led the skilled person to do. In the present case, the prior art, at best, provides general guidance to try to create a resin-compatible sizing agent for use on a glass cloth that is utilized in the creation of laminates. Only in hindsight could it have been obvious to one with the cited reference before her to have pieced together the teachings in the claimed manner with a reasonable expectation of success.

As a result, Applicants respectfully submit that the Examiner has failed to establish a prima facie case of obviousness, and respectfully request that the § 103 rejection of claims 1, 18, 40, and 47 be withdrawn.

III. Rejection Under 35 U.S.C. § 103(a) over Nagamine in view of Adolfovna

Claims 2-3, 5, 12-17, 19, 20, and 41-46 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Nagamine in view of Russian Patent Publication No. 2072121 ("Adolfovna") for reasons discussed at pages 3-4 of the Office Action.

Applicants respectfully traverse this rejection for at least the reasons that follow.

Applicants submit that the Examiner has not and cannot show, at a minimum, that there would have been a suggestion or motivation in the references or in the

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knowledge generally available to one of ordinary skill in the art to modify and/or combine the references in order to recreate Applicants' invention. M.P.E.P. §2143.03.

Neither Nagamine nor Adolfovna teach or even remotely suggest a motivation to combine their teachings. As the Examiner correctly points out, Nagamine, the primary reference, fails to teach the incorporation of particles. Since Nagamine fails to teach such an incorporation, the Examiner states that one would be motivated to modify the primary reference by incorporating aspects of Adolfovna. Specifically, the Examiner states that "Adolfovna teaches substrates for circuit boards comprising fabric sheets impregnated with a polymer binder comprising boron nitride powder." Office Action at 4.

These disclosures, however, are far from the objective reasoning that is necessary when asserting obviousness from a combination of references and certainly do not meet the "clear and particular" standard required by the Federal Circuit. *In re Dembiczak*, 175 F3d at 999. Rather, the Examiner has neglected to point to any teaching, suggestion, or incentive that would lead to Applicants' claimed invention.

As emphasized above, Nagamine's coated glass fiber strands work perfectly well without the inclusion of particles and its disclosure provides no indication to one of ordinary skill in the art that the coated glass is in need of modification. Indeed, absent from Nagamine is a reference to a fiber coating that utilizes any type of particle. Instead, general descriptors of the coating material are utilized, indicating that no such particulate material is taught or claimed. As a result, Nagamine provides no suggestion or motivation to add particles to the sizing composition utilized therein.

Adolfovna does not remedy the deficiencies of Nagamine. Although Adolfovna does teach a fabric that is impregnated with a *binder* containing boron nitride, the

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reference does not disclose a fiber or cloth at least partially covered with a resin compatible coating. Instead, Adolfovna discloses, for example, a preform composed of a basalt fabric impregnated with a three dimensional matrix-type material containing boron nitride particles. Much detail is included in Adolfovna about the composition and makeup of the binder material itself, but there is no disclosure of any thin, two dimensional coating on the individual fibers or the fabric that exists prior to the incorporation of the matrix material, as is presently claimed, much less a resin compatible material that does not need to undergo de-oiling or cleaning.

As a result, Adolfovna does not provide any motivation for adding the particulate material in its binder to the sizing composition in Nagamine. Whereas it might be tempting, in hindsight, for the Examiner to suggest such an enhancement, such hindsight reconstruction analysis is improper. See *In re Dembiczak*, 175 F.3d at 999.

Thus, the rejection of claims 2-3, 5, 12-17, 19, 20, and 41-46 fails because it does not meet the second requirement for demonstrating obviousness, that being a demonstration of a suggestion or motivation to combine the references. For this reason, Applicants submit that this rejection is improper and respectfully request that it be withdrawn.

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IV. Conclusion

In view of the foregoing remarks, Applicants respectfully submit that the present application is not obvious in view of the references cited against it.

Applicants respectfully request the Examiner's reconsideration of the application, and timely allowance of the pending claims.

Please grant any extensions of time required to enter this response and charge any additional required fees to our Deposit Account No. 06-0916.

Respectfully submitted,

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